

Outlook



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Processed Agricultural Exports Led Gains in U.S. Agricultural Exports Between 1976 and 2002

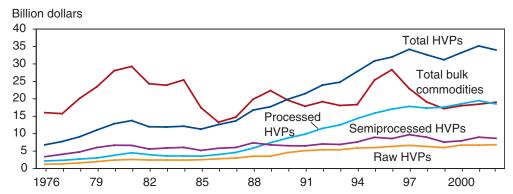
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Abstract

U.S. agricultural exports rose to \$53 billion in calendar year 2002, an increase of \$30 billion in nominal dollars since 1976. In real terms, the average rate of export growth was 1.7 percent per year. U.S. export gains occurred mainly in high-value products (HVPs); bulk exports rose slightly, but suffered a significant loss of market share. Of the total HVP exports, processed HVPs (meats and grain products) accounted for the most growth; semiprocessed HVPs (feeds, hides, and oilseed products) were relatively stable; and raw HVPs (fruits, vegetables, and live animals) expanded slightly. Asia and the Americas surpassed Europe as the largest U.S. agricultural markets.

Keywords: U.S. exports, value, by commodity group, by country, FATUS, calendar years.

U.S. agricultural exports, bulk and high-value products



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

Strong Growth in U.S. Exports From 1976-96; Slower Growth Since 1997

Between calendar years 1976 and 2002, global demand for U.S. agricultural exports increased substantially. U.S. exports in 1976 equaled \$23 billion, but rose to \$53 billion by 2002, a gain of \$30 billion or an average of 3.3 percent per year in nominal terms. Using an index of U.S. export unit values as a deflator, the average annual rate of growth in U.S. agricultural exports in real terms over the 26 years equaled 1.7 percent.

According to United Nations trade data, using USDA's definition of agriculture, world agricultural exports since 1976 also rose substantially. Because the United States is one of the largest exporters of agricultural products, expansion in global trade benefited U.S. exports, particularly earlier in this period. During the last decade, however, competitors' exports also increased sharply, particularly those of emerging bulk commodity competitors such as Brazil, Argentina, China, and the Black Sea region.

Most of the growth in U.S. agricultural exports during the 26 years from 1976 to 2002 occurred between 1976 and 1996, for a gain of \$37 billion. However, in the 5 years from 1997 to 2002 the global economy experienced a period of sluggishness and, in some countries, recession. This period began in mid-1997 with the financial crises in Asia and Russia and then later in Latin America. UN trade data shows the value of global agricultural trade declining annually from 1997 through 2002. This global slowdown mirrors a drop in economic growth in the United States. U.S. agricultural exports, however, declined only in the years 1997-99; some growth in U.S. exports resumed in 2000 and 2002, but at a much slower rate.

Although average annual U.S. agricultural export growth was relatively strong from 1976 to 2002, from 1989 to 2002 it slowed to 2.2 percent annually in nominal terms (1.4 percent in real terms). And since 1997, U.S. agricultural exports have actually declined an average of 0.6 percent annually in nominal terms, despite gains in 2000 and 2002. In real terms, however, the last 5 years of U.S. agricultural exports show improved average growth of 1.9 percent per year because export unit values fell.

Several factors contributed to the general gains in U.S. agricultural exports. U.S. farm policy played a role,

becoming increasingly flexible over time and allowing production to adjust to demand. The value of the U.S. dollar also contributed; dollar depreciation in the 1970s and between 1986 and 1996 supported U.S. sales abroad.

Beginning in the 1970s, reform of the Common Agricultural Policy (CAP) played a crucial role in trade with the European Union (EU). In the mid-1970s, the EU introduced grain price supports; it followed with oilseed price supports later in the decade. Price and income supports led to EU output growth, while food consumption remained relatively flat. By 1985, the EU had become a net coarse grains exporter in competition with the United States. Consequently, much of the need for U.S. bulk grain exports to the EU was eliminated, and EU imports of U.S. bulk grains declined sharply during most of the 26-year period. As a result, the composition of U.S. agricultural exports to the EU shifted toward higher valued products.

Also contributing to trade growth, particularly in the 1990s, was trade liberalization. Regional and bilateral trade agreements were very important for expansion of U.S. HVP exports to Japan, Canada, and Mexico. Barriers to U.S. trade were reduced in Japan's meat and fruit markets, allowing for significant trade expansion. In addition, the North American Free Trade Agreement (NAFTA) boosted U.S. exports to Canada and Mexico, as well as raising U.S. imports from these countries.

In the most recent 5 years, however, U.S. agricultural exports were constrained by several developments. Slow growth in global demand due to slow economic expansion was a factor, but not the only one. Price changes were always an important aspect of declines in U.S. agricultural exports. For example, depressed global prices in 1986 reduced overall export value sharply. More recently, the value of the U.S. dollar has been high relative to other currencies, especially in countries whose currencies depreciated during the economic slowdown and financial crises of 1997-99. This made the dollar less competitive relative to competing exporters' currencies. It was more expensive for other countries to import from the United States, and U.S. exports declined.

Further, in the 1990s many former Communist countries became market oriented. Prior to economic reforms, these countries had been responsible for much of the demand for U.S. bulk commodity imports, particularly in years of poor weather. But in the 1990s, reforms led to economic recession in the Newly Independent States (NIS) and Eastern Europe and an initial sharp drop in the demand for foreign imports. This contributed to the continued contraction in U.S. bulk commodity exports to Europe during the 1990s.

U.S. bulk exports, such as wheat and corn, also have been adversely affected by the emergence of other countries as major export competitors, especially the former Soviet Union and Eastern European countries in the Black Sea region, but also Argentina, Brazil, and China. Prior to the Communist era, Russia, the Ukraine, Kazakhstan, and Eastern European countries in the Black Sea region had been large competitors in export of wheat, corn, oilseeds such as sunflowers and, further north, rapeseed. During the past 5 years, these economies overcame their initial recessions after the fall of Communism, returned to economic growth, and

again began exporting these products in competition with the United States.

Argentina, Brazil, and China have also increased the export of bulk commodities in competition with U.S. exports. Argentina's and Brazil's export growth was largely due to financial crises and currency depreciation, making their products more competitive on world markets than U.S. exports. China's export growth reflected gradual liberalization of some trade policies, as well as export of its large grain stocks, in the years just before it joined the WTO in December 2001.

Recently, biotechnical modifications also have impacted U.S. exports of some commodities. For example, the U.S. market for corn in the EU has all but disappeared because the EU will not take major varieties of genetically modified U.S. corn. However, in other places, with quick adjustments by U.S. exporters to separate food-use corn from other corn, exports that were initially lost already have been mostly restored. The overall impact of biotech on U.S. agricultural exports thus has been small, affecting U.S. exports in only a few recent years.

High-Value Product Export Growth Strong; Bulk Commodity Growth Weak

As global demand shifted, both the country and the commodity composition of U.S. agricultural exports also evolved. The United States, responding to rising demand for higher valued goods, expanded exports of HVPs substantially. The share of HVPs in U.S. exports rose from 30 to 64 percent during the 26-year period.

In 1976 the 10 largest U.S. export commodities, in terms of value, were corn, wheat, soybeans, cotton, soybean meal, tobacco, rice, sorghum, bovine hides, and tallow. Except for soybean meal, bovine hides, and tallow, these are all major bulk commodities. Bulk commodity trade led U.S. agricultural exports in 1976. And at that time, the primary agricultural market for the United States was Europe.

Since 1976, however, the United States has turned increasingly to the Americas and Asia for export markets. Asia and the Americas led all regions in expansion of U.S. agricultural imports during the 26-year period. In addition, HVP exports rose much more rapidly than bulk exports. In particular, exports of meats and processed products led U.S. trade growth.

wheat, and cotton—remained in the top 15 largest U.S. agricultural exports in terms of value, and of those, only soybeans and cotton had shown enough growth over the 26-year period to make the list of the fastest growing commodities.

The value of U.S. exports of HVP saw substantial

contracted sharply, even though bulk export value

overall grew by nearly 1 percent per year.

gains over the 26 years from 1976 to 2002. Processed

HVPs rose dramatically, while raw HVPs also gained. The bulk commodity share of total agricultural exports

Bulk commodities include wheat, rice, coarse grains,

oilseeds, cotton, and tobacco. Over the past 26 years,

bulk commodity exports fell from 70 percent of total

1989, and to just 37 percent in 2002. In 1976, seven of

the eight largest U.S. exports by value were bulk com-

U.S. agricultural exports in 1976 to 56 percent in

modities—corn, wheat, soybeans, cotton, tobacco,

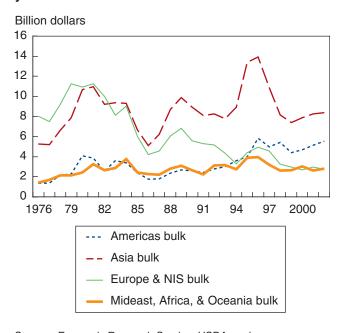
rice, and sorghum. But by 1989 the value of rice, sorghum, and tobacco exports had declined, and

although these commodities were still in the top 15

exports, they ranked lower than before in value. By

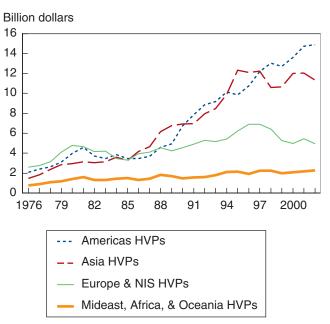
2002, only 4 bulk commodities—soybeans, corn,

U.S. bulk export value by region by calendar



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

U.S. HVP export value by region by calendar year



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

year

Average annual growth in U.S. agricultural exports, calendar years 1976-2002

Commodity group	1976 to 1989		1989 to		
	\$ Billion	Percent	\$ Billion	Percent	
Bulk commodities	6.333	2.6	-3.343	-1.2	
HVProducts	10.93	7.7	16.286	5.1	

Sources: Economic Research Service, USDA and Census Bureau, U.S. Department of Commerce.

The value of total bulk commodity exports over the 26 years still rose slightly, though less than 1 percent, and it is responsible for hardly any of the growth in U.S. agricultural export value since 1976. In addition, all the growth in bulk exports occurred in the first half of the 26-year period. Bulk commodity trade declined after 1989, slipping by an average of 1.2 percent annually through 2002.

This means HVP exports were rising much more rapidly over the 26 years, an average of 6.3 percent annually. HVP exports accounted for \$27.1 of the \$30 billion gain in total U.S. agricultural exports over the period. And, HVP trade expanded in both halves of the period, with greater growth in value occurring between 1989 and 2002 even though the percentage rate of growth slowed.

U.S. exports of HVPs exceeded those of bulk commodities for the first time in 1991 and since then have continued to rise. Except in 2002, HVP exports contracted slightly. HVPs now account for 63 percent of all U.S. agricultural exports. High-value products include meats, dairy products, hides and skins, feeds and fodders, vegetable oils and meals, fruits, vegetables, nuts, and all products processed from raw agricultural products except textiles, hard liquors, and tobacco products. Textiles, hard liquors, and tobacco products are excluded from the U.S. Department of Agriculture's definition of agricultural trade commodities.

The slower rate of growth for both bulk and high-value products in the second half of the 26-year period is primarily a reflection of the financial crises of 1997 to 1999, the global economic slowdown, and the higher value of the U.S. dollar in the last few years. Trade is only now beginning to recover from these setbacks.

Processed HVPs Account for Most of Total HVP Growth and Equal the Bulk Export Share of Total Exports in 2002

High-value products can be divided into three sub-groups—raw, semiprocessed, and processed HVPs. Raw HVPs, the smallest but second-fastest-growing group, include live animals, fresh fruits and vegetables, nuts, and nursery and greenhouse products. U.S. exports of these products grew 6.7 percent over the 26 years, from \$1.3 billion to \$6.8 billion.

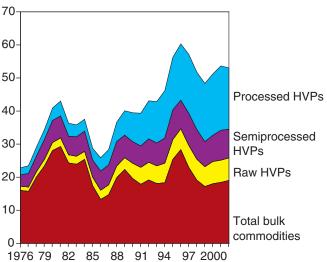
Semiprocessed HVPs include fats, hides, feeds, wool and other fibers, flour, vegetable oils, meals, and sugar. These products are primarily used to produce other more processed products. They showed the least export growth—3.7 percent from \$3.4 billion in 1976 to \$8.7 billion in 2002—but still exceeded raw HVP exports in total value.

Processed HVPs include meats, dairy items, packaged foods such as pasta, cakes, and biscuits, dried and canned fruits and vegetables, and beverages such as wine, juice, soda, milk, coffee, and cocoa. These HVP exports grew the most over the 26 years, rising by \$16 billion, from \$2.3 billion in 1976 to \$18.5 billion in 2002. In particular, Asia and the Americas sharply expanded purchases of U.S. processed HVPs in the 1990s.

In 2002, the processed HVP group alone accounted for 35 percent of total U.S. agricultural exports, virtually equaling the bulk commodity share. This product

The changing pattern of U.S. agricultural export value, by commodity group in calendar years

Billion dollars



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

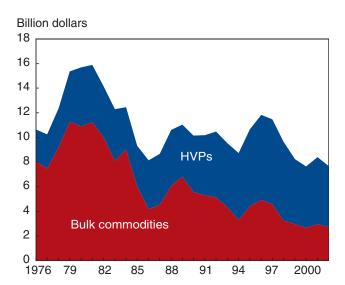
group has approximately equaled, or surpassed, bulk commodity exports annually since 1999 and is now the largest U.S. agricultural export group in most years. Given the continued expansion of processed HVP exports, processed HVPs are likely to continue surpassing bulk commodity exports in value in the future.

Asia and the Americas Displace Europe as the Largest U.S. Agricultural Market

As the commodity composition of U.S. agricultural exports changed, so did the country composition. Europe (including Eastern Europe and the former Soviet Union) was the largest U.S. agricultural export destination in 1976, but U.S. exports to Europe have since declined. Europe accounted for \$10.6 billion in U.S. agricultural exports in 1976; by 2002, exports to Europe had dropped to \$7.7 billion. CAP reform in the EU was a factor, as was expanding production of some crops. The CAP restricted some commodities from entering the region. Europe's imports of U.S. bulk commodities fell by \$5.3 billion, while its imports of HVPs rose \$2.3 billion during this period. Expansion of other non-tariff barriers also played a role, as did growing competition from other exporters.

In the 1990s, the GDP of the former Communist block countries declined and livestock herds disappeared. Demand for bulk commodity exports dropped sharply as a result. Since then these countries have emerged as export competitors for bulk commodities, but as their economies start to expand again they also are beginning to buy some higher valued U.S. exports. Meanwhile, Western Europe has become an important source of HVPs for the Eastern block, while the East is boosting its exports of bulk commodities to the

The value of U.S. agricultural HVP and bulk exports to Western Europe, the former USSR, and Eastern Europe, calendar years 1976-2002



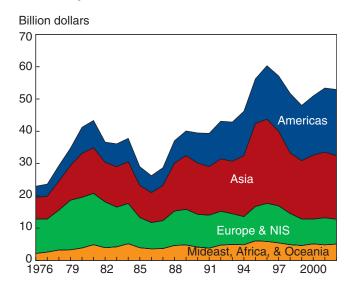
Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

West. Each of these regions competes with U.S. exports to the other region. And each has the advantage of proximity in the other's market, compared with U.S. exports. U.S. exports of bulk commodities to these countries, in particular, have plunged since 1976.

In contrast, the value of U.S. agricultural exports to the Americas and Asia expanded over the 26-year period. U.S. exports to the Americas rose from \$3.4 billion in 1976 to \$20.4 billion in 2002. U.S. exports to Canada and Mexico already were rising in 1989, prior to the implementation of NAFTA in 1994, which boosted exports to Canada and Mexico further. Population growth in the Americas has been a factor, as has stronger economic growth and an expanding middle class, particularly in Mexico. The proximity of U.S. ports and the fact that these economies are closely tied to U.S. economic performance also has been important. Sustained HVP exports to Canada and Mexico have led the way for expansion into the rest of the Western Hemisphere. Over the 26-year period, U.S. exports of HVPs to the Americas have increased by \$12.8 billion, while bulk exports rose by \$4.2 billion.

Growth of U.S. exports to Japan led the way for U.S. export expansion in Asia. Recently, however, growth

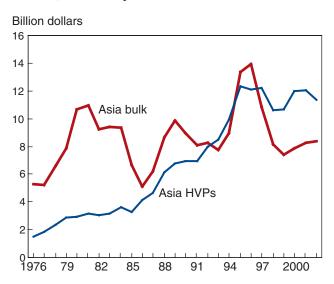
Changing regional pattern of the total value of U.S. agricultural exports to various regions by calendar year



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

of exports to Japan has faltered as Japan's economic growth declined. U.S. agricultural exports to Japan grew nearly 7 percent per year from 1976 through 1989, but since 1989 the rate of growth has shrunk to just 0.2 percent per year. The agreements with Japan on beef and citrus access were largely responsible for Japan's greater imports of U.S. agricultural products. Exports to the rest of Asia grew at an average annual pace of 8 percent between 1976 and 1989 and by 2.3 percent after 1989. Strong economic growth and the emergence of a large middle class are largely responsible for Asia's increasing demand for U.S. agricultural goods. Asia's imports of U.S. goods rose from \$6.7 billion in 1976 to \$19.7 billion in 2002. Economic growth in Taiwan, South Korea, and several countries in Southeast Asia boosted U.S. exports to the rest of Asia, except during the 1997-99 crisis. The emergence of China as a freer market and expansion of the middle class in India also have been important factors in increased exports to Asia, particularly in the last 5 years when the rest of Asia was weak. A strong U.S. economy also has boosted Asia's economic growth. But because Japan is likely to continue weak, U.S.

The value of United States HVP and bulk exports to Asia, calendar years 1976-2002



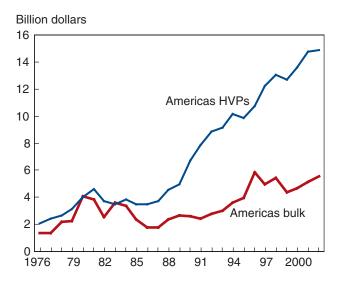
Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

exports to Asia are not expected to make quite as strong a rebound as exports to the Americas in the coming years.

HVPs clearly have been responsible for most of the gains in U.S. exports to the Americas during the period. However, bulk commodity exports also show some growth. During the 1990s, U.S. exports of HVPs to the Americas more than doubled. HVP exports to the Americas equaled \$14.9 billion in 2002, while bulk exports were \$5.6 billion, compared with \$2.1 and \$1.4 billion, respectively, in 1976.

HVPs gradually gained in the mix of Asia's imports from the United States. HVP exports to Asia rose by \$9.9 billion during the 26 years, with steady gains through 1996, followed by a drop and stabilization thereafter. In contrast, U.S. bulk commodity exports to Asia show considerable variation over the period, rising and falling sharply, depending on the year and the price. But U.S. bulk exports to Asia in 2002 were only slightly above where they began in 1976 and considerably below the 1996 peak.

The value of United States HVP and bulk exports to Americas, calendar years 1976-2002



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

Canada Becomes Number One U.S. Market; Mexico Not Far Behind

In 1976, Japan was the top U.S. agricultural export market, followed closely by the Netherlands (which includes transshipments to the rest of Europe), Germany, the former USSR, and Italy—that is, much of Europe. At that time, Canada ranked fifth as a U.S. export destination, and Mexico was not among the top 15 U.S. agricultural markets. By 1989, Japan still led U.S. export destinations, but strong gains had been made by South Korea, Taiwan, China, and Mexico, while European countries dropped in rank.

In 2002, exports to Japan were overtaken by exports to Canada, and Japan slipped to being the second-largest market, followed closely by Mexico and then South Korea, China, and Taiwan. A few European countries are still among the 2002 top 15 U.S. agricultural

export markets, but not nearly as many as before, nor are they as highly ranked.

Japan's economy has had particular difficulty recovering from the financial crises and has faced a decade of lackluster growth. Its economic growth is likely to rebound in 2003 and 2004, but only to about 1 percent. In contrast, economic growth in Canada and Mexico has already begun improving and prospects in the near term are strong. Mexico's GDP growth is projected to rise from 2.6 to 3.8 percent in 2003 and 2004; Canada is expected to reach 3.5 percent growth in 2004 compared with 2.4 percent in 2003. Consequently, U.S. agricultural exports to Mexico also could overtake exports to Japan in the near future.

Value of total U.S. agricultural exports ranked for top destinations, by calendar year

Country	1976	Country	1989	Country	2002
		Billion dollars			
EUROPEAN UNION	7.79	JAPAN	8.2	CANADA	8.7
JAPAN	3.58	EUROPEAN UNION	6.9	JAPAN	8.4
FORMER USSR	1.56	FORMER USSR	3.6	MEXICO	7.2
CANADA	1.50	MEXICO	2.7	EUROPEAN UNION	6.1
KOREA, REP OF	0.83	SOUTH KOREA	2.6	SOUTH KOREA	2.7
INDIA	0.78	CANADA	2.2	CHINA (MAINLAND)	2.1
POLAND	0.49	CHINA (TAIWAN)	1.8	CHINA (TAIWAN)	2.0
TAIWAN	0.47	CHINA (MAINLAND)	1.4	HONG KONG	1.1
EGYPT	0.45	EGYPT	1.0	EGYPT	0.9
MEXICO	0.37	IRAQ	0.7	INDONESIA	0.8
		Americas Europe	& NIS a/Africa/Middle	East	

Sources: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

Beef, Vegetable Products, Feeds, Grain Products, and Chicken Meat Led Export Growth

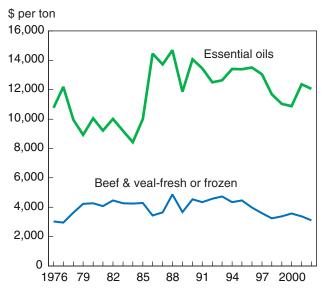
Not surprisingly, the fastest growing U.S. agricultural exports are going to the largest U.S. export markets—Canada, Japan, and Mexico. Since most expansion over the last 26 years has been in processed HVPs, it makes sense that two of the three leading markets are developed economies.

U.S. exports to Canada have risen by more than \$7 billion over the 26 years, from \$1.5 billion to \$8.7 billion, while exports to Mexico rose by \$6.9 billion, from \$0.4 to \$7.2 billion. Exports to Japan rose to \$11.7 billion in 1996 from \$3.5 billion in 1976, but have since dropped back to just \$8.4 billion. For Canada and Mexico, income growth, trade liberalization under NAFTA, and proximity have been important factors in this expansion of export value. For some commodities, higher prices also contributed. For

Japan, trade liberalization also played a part, as did economic growth from 1976-1996, though not afterward.

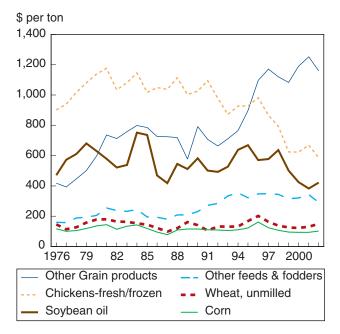
However, in the 5 years since the 1997 financial crisis slowed global economic growth, several bulk products have disappeared from the top 10 U.S. agricultural exports. In this period, the U.S. agricultural exports showing the most growth in value have been almost entirely processed HVPs. Part of the reason for this has been relatively low commodity prices during these 5 years, particularly for bulk commodities. Bulk prices were only just starting to recover again in 2002 and 2003.

Unit value of selected higher-valued U.S. agricultural exports by calendar year



Source: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

Unit value of selected U.S. agricultural exports by calendar year



The greatest gains in U.S. export values during the last 26 years occurred in fresh and frozen beef and veal. Most of the growth in shipments was to Japan, Mexico, South Korea, Canada, Hong Kong, and Taiwan. These six countries have been among the largest U.S. beef markets since 1988.

In value terms, a bulk commodity, soybeans, is second in gains since 1976 and in 2002 was the leading U.S. agricultural export. The EU continues to be the largest market for U.S. soybeans, although exports to the EU have declined from \$1.9 billion to \$1.2 billion over the 26-year period. However, in 2002, China surpassed other large markets, such as Japan, Mexico, Taiwan,

Indonesia, and Canada, to rise to second-largest market for the first time. China, which continued to be a large market in 2003 due to recent policies promoting soybean imports to supply its oilseed-crushing industry, shows the largest gains in imports from the United States by far. However, Mexico, Indonesia, South Korea, and Japan also have grown as importers.

Corn and wheat were the two next-largest U.S. exports in 2002, after soybeans. These commodities traditionally have been the largest U.S. exports, but have slipped in rank in recent years. In 2002, corn went primarily to Japan, Mexico, Taiwan, Canada, and Egypt. Top customers for U.S. corn have changed little since

Top-ranked U.S. agricultural exports, by value, selected calendar years

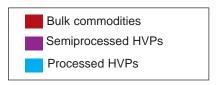
	1976	19	989		2002
		Billion dollars			
Corn	5.2	Corn	6.6	Soybeans	5.7
Wheat, unmilled	3.9	Wheat, unmilled	5.9	Corn	4.8
Soybeans	3.3	Soybeans	3.9	Wheat, unmilled	3.6
Cotton, excl. linters	1.0	Cotton, ex. Linters	2.2	Beef & Veal, fresh & frozen	2.5
Soybean meal	0.9	Beef & Veal-fresh & frozen	1.4	Other Vegs-prep or pres.	2.1
Tobacco, flue-cured	0.7	Bovine hides-whole	1.3	Cotton, ex. Linters	2.0
Rice-paddy, milled, parb.	0.6	Soybean meal	1.1	Other feeds & fodders	1.9
Grain sorghums	0.6	Rice-paddy, milled, parb.	1.0	Other Grain Products	1.3
Bovine hides-whole	0.5	Grain sorghums	0.9	Chickens-fresh & frozen	1.3
Tallow, inedible	0.4	Other Feeds & Fodders	0.8	Soybean meal	1.2

Sources: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.

U.S. agricultural exports with greatest gains in value

	2002 over 1976
	Million dollars
Beef & Veal-fresh & frozen	2,379.2
Soybeans	2,361.7
Other Vegs-prepared or preserved	1,966.5
Other feeds & fodders	1,633.7
Other grain products	1,209.9
Chickens-fresh & frozen	1,148.7
Cotton, excluding linters	966.3
Pork-fresh & frozen	923.3
Beverages, excluding juices	758.7
Essential oils	721.9

Sources: Economic Research Service, USDA, and Census Bureau, U.S. Department of Commerce.



1989 when the former Soviet Union, the EU, and South Korea were larger importers and Canada was smaller. The change in wheat markets since 1989, however, is more notable. In 1989, China was the largest market, followed by the former Soviet Union, Egypt, Japan, and Pakistan. The largest U.S. wheat markets in 2002 were Japan, Mexico, Egypt, Nigeria, and the Philippines. U.S. corn and wheat are the two commodities that have begun to face greater competition in the past 5 years from exporters emerging in the Black Sea region as the former Communist countries expand production and markets.

"Other vegetables prepared or preserved," which ranks third in value gains among exports since 1976 and is the fifth-ranked 2002 export, includes a number of processed products. In this group are dried and canned mushrooms, truffles, onion and garlic powder, cassava, sweet potatoes, other tubers, flour, meal, starches of vegetables and potatoes, vegetables preserved in vinegar, sauces, seasonings, and soups. Canada, Mexico, Japan, South Korea, and Taiwan were the largest markets in 2002 and also show the largest gain in value since 1976 for this export.

Not all the growth over the 26-year period, however, occurred in Canada, Mexico, and Japan. For example, Mexico, Turkey, Indonesia, Thailand, and China now consistently rank among the largest importers of U.S. cotton, along with some of the more traditional destinations such as South Korea, Japan, and Taiwan, which have declined in importance in recent years. These gains in cotton exports to nontraditional markets reflect the trend towards contraction of textile and apparel industries in developed countries such as Europe and Japan and expansion of the same industries in less developed countries.

Since 1994, Russia and Hong Kong have become the largest U.S. markets for chicken meat, followed by Canada and Mexico. Canada and Hong Kong have been large markets throughout the 26-year period, but Russia and Mexico are relative newcomers to the top of the list for this export. Exports of chicken to Mexico began rising in 1988. Exports to Russia started rising in about 1990, when it was still part of the Soviet Union. And U.S. exports of chickens to Japan and Singapore, formerly large markets, have declined markedly since the Asian financial crisis in 1997. Rising demand for other meats, such as high-quality American and Australian beef, has reduced poultry meat consumption in these markets.

Mexico is now the major U.S. market for exports of "other grain products." This group is made up largely of processed products such as pasta, pastries, and cakes in which grains are the main ingredient, as well as of groats, meals, and flours of grains. Mexico has shown by far the largest gains in import of these products from the United States. Canada and the EU run a distant second and third to Mexico in both total imports and growth of imports of this commodity from the United States.

"Other feeds and fodders" is another export group with strong gains since 1976. Japan, the EU, Canada, Mexico, and South Korea were the top destinations for this export in 2002. The EU, Japan, Canada, and Mexico have been among the top U.S. markets since 1976. Virtually all the growth in this export since 1976 has been in these five countries, but recently, Taiwan, Thailand, and Indonesia have gained as well.